

and the total content in said fiber of palladium, nickel and cobalt is 100 ppm or less, which comprises extruding a polyketone solution according to any one of claims 1 to 7 through a spinneret to obtain a fibrous material, removing a portion or the whole of the salt(s) used in the solvent from the fibrous material, and then stretching the fibrous material in a temperature range of 0 to 300°C to produce said fiber.

A2
Coulter

9. (Amended) A process for producing polyketone fiber having an alternating copolymer of carbon monoxide and one or more olefins, wherein 90 wt% or more of said alternating copolymer comprises carbon monoxide units and olefin units, and the total content in said fiber of palladium, nickel and cobalt is 100 ppm or less, which comprises extruding a polyketone solution according to any one of claims 1 to 7 through a spinneret; passing the fibrous material obtained by the extrusion through a coagulation bath comprising 50 wt% or more of water; if necessary, washing the fibrous material with water or an aqueous solution of pH 4 or lower to reduce the total content in the fibrous material of at least one element selected for use from the group consisting of zinc, calcium and iron, to 10,000 ppm or less; drying the fibrous material at a temperature of 50°C or higher to remove a portion or the whole of the water from the fibrous material; and then stretching the fibrous material at a ratio of 3 or more at a temperature of 50°C or higher to produce said fiber.

A3

11. (Amended) A process according to claim 9, wherein the temperature of said coagulation bath and/or the temperature of said aqueous solution used for the washing if necessary are 50 to 95°C.

12. (Amended) A process for producing polyketone fiber according to claim 9, wherein the coagulation bath containing at least 1 ppm of the salt(s) used in the

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

A3
Control

solvent for the polyketone and removed from the fibrous material, and a portion or the whole of the water or the aqueous solution having a pH of 4 or lower, which is used if necessary, are concentrated; the same salt(s) used in the solvent for the polyketone is freshly added to the concentrated aqueous solution if necessary; and the thus obtained aqueous solution is recycled to be reused as a solvent for the polyketone.

13. (Amended) A polyketone fiber produced by a production process according to claim 8.

14. (Amended) A polyketone fiber comprising an alternating copolymer of carbon monoxide and one or more olefins, wherein 90 wt% or more of said alternating copolymer comprises carbon monoxide units and olefin units, and the total content in said fiber of palladium, nickel and cobalt is 100 ppm or less.

A4

17. (Amended) A tire cord characterized by using a polyketone fiber according to claim 13 in a proportion of at least 50 wt%.

18. (Amended) A fiber-reinforced composite material wherein 1 wt% or more of fibers used is a polyketone fiber according to claim 13.

A5

20. (New) A process for producing polyketone fiber having an alternating copolymer of carbon monoxide and one or more olefins, which has a storage elastic modulus at 180°C of 80 g/d or more in the measurement of dynamic viscoelasticity at a frequency of 110 Hz, which comprises extruding a polyketone solution according to any one of claims 1 to 7 through a spinneret to obtain a fibrous material, removing a portion or the whole of the salt(s) used in the solvent from the fibrous material, and then stretching the fibrous material in a temperature range of 0 to 300°C to produce said fiber.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

As
Counted

21. (New) A process for producing polyketone fiber having an alternating copolymer of carbon monoxide and one or more olefins, which has a storage elastic modulus at 180°C of 80 g/d or more in the measurement of dynamic viscoelasticity at a frequency of 110 Hz, which comprises extruding a polyketone solution according to any one of claims 1 to 7 through a spinneret; passing the fibrous material obtained by the extrusion through a coagulation bath comprising 50 wt% or more of water; if necessary, washing the fibrous material with water or an aqueous solution of pH 4 or lower to reduce the total content in the fibrous material of at least one element selected for use from the group consisting of zinc, calcium and iron, to 10,000 ppm or less; drying the fibrous material at a temperature of 50°C or higher to remove a portion or the whole of the water from the fibrous material; and then stretching the fibrous material at a ratio of 3 or more at a temperature of 50°C or higher to produce said fiber.

22. (New) A process according to claim 21, wherein said coagulation bath is an aqueous solution containing one or more salts in a concentration lower than that in the aqueous solution used as a solvent for the polyketone.

23. (New) A process according to claim 21, wherein the temperature of said coagulation bath and/or the temperature of said aqueous solution used for the washing if necessary are 50 to 95°C.

24. (New) A process for producing polyketone fiber according to claim 21, wherein the coagulation bath containing at least 1 ppm of the salt(s) used in the solvent for the polyketone and removed from the fibrous material, and a portion or the whole of the water or the aqueous solution having a pH of 4 or lower, which is used if necessary, are concentrated; the same salt(s) used in the solvent for the polyketone is freshly

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

added to the concentrated aqueous solution if necessary; and the thus obtained aqueous solution is recycled to be reused as a solvent for the polyketone.

25. (New) A polyketone fiber produced by a production process according to claim 20.

26. (New) A polyketone fiber produced by a production process according to claim 9.

27. (New) A polyketone fiber produced by a production process according to claim 21.

28. (New) A tire cord characterized by using a polyketone fiber according to any one of claims 14 to 16 in a proportion of at least 50 wt%.

29. A fiber reinforced composite material wherein 1 wt% or more of fibers used is a polyketone fiber according to any one of claims 14 to 16.

30. A fiber reinforced composite material according to claim 29 which is a tire, a belt or a building material.

REMARKS

In response to the above Office Action and the requirement for restriction, applicants elect Group I and claims 1-7 drawn to polyketone solutions with traverse.

The claims of Group II, namely, process claims 8-12, which have now been amended to define the polyketone fiber being produced as set forth in claim 14, as well as new process claims 20-24, which are similar to claims 8-12, but define the polyketone fiber being produced as set forth in claim 16, are all dependent on solution claims 1-7.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com